

Abstract

The invention is directed to an apparatus and a method for generating a fault detection signal when a differential signal is in a fault condition. The fault condition arises when the data transmission path in a differential signaling device is either open, shorted, or terminated by an abnormal means, and is such that the inputs are within the valid common-mode range and a valid differential signal cannot be obtained. The invention is buffered from the differential signal source, and an intermediate signal is produced in response to the differential signal. Portions of the intermediate signal are compared to a reference signal, and based on the comparisons, fault condition control signals are produced. A fault detection signal is produced when two fault condition control signals indicate the presence of a fault. The fault detection signal is made available for invocation of a failsafe state.

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